SYPHILIS OF THE BLADDER *

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In a careful review of the literature, Thompson found only eighty-four cases of syphilis of the bladder, and of these only fifty-eight were accepted as authentic.

Prior to the discovery of the Wassermann test and the use of the cystoscope, many cases of bladder lues undoubtedly were unrecognized, so that it is fair to assume that syphilis of the bladder occurs more frequently than the few reported cases indicate.

I wish to report two cases of syphilis of the bladder.

The first patient was a druggist, 45 years of age, whose previous history showed a gonorrheal infection nineteen years ago, but he denied any knowledge of a chancre. The main complaint was great bladder irritability and marked frequency of urination for the past eight months. Two weeks ago his symptoms became distinctly worse; he developed severe pains over the abdomen and passed clots of blood in the urine.

A cystoscopic examination, May 2, 1922, showed a small, irritable, diffusely inflamed bladder containing about three ounces of cloudy and foul-smelling urine.

On the right bladder wall, immediately above the right meatus, an edematous area, the size of a dollar, was seen, covered with calcareous deposits. Indigo carmine, given intravenously, appeared in strong color upon the left side within five minutes, and a strong blue could be seen coming from just below the incrustations upon the right side at the same time. The left ureter was catheterized, but I was unable to pass a catheter upon the right side.

Phenolsulphonephthalein appeared in five minutes on the left side with an output of 8 per cent in fifteen minutes. The bladder specimen showed 12 per cent of the dye.

Microscopic examination of the specimen from the left side was negative for pus. X-ray of the kidneys, ureters and bladder showed an irregular shadow over the right bladder area. The kidneys were negative for stone.

At the completion of this examination I was uncertain regarding the lesion in the bladder and debated in my mind if this could be a malignant tumor, tuberculosis, or a phosphatic cystitis. I confess that a luetic lesion was not at once considered. Following the cystoscopic examination, considerable blood was present in the urine, and three days following the examination the patient was unable to void on account of clots filling the bladder. Attempts at catheterization were unsuccessful. It became necessary to do a suprapubic cystotomy for drainage. By this time the laboratory work had been completed, which failed to demonstrate the tubercle bacilli in the urine, but showed a four-plus Wassermann reaction. At operation the bladder was found to be very small and firmly fixed deep in the pelvis, and it was with considerable difficulty that the dissection was made to place a tube in the bladder. Exploration of the bladder showed a large number of fragile calcareous deposits over an ulcer in its right wall. These deposits were removed, but nothing further attempted to the ulcer itself. He was given small doses of neo salvarsan and mercurial rubs. The urine became free from blood and the fistula closed, so that on June 15 he went to his home and received anti-syphilitic treatment from his physician.

The suprapubic fistula reopened from time to time. The patient did not gain weight and was not able to go back to his work. He developed a fever and complained of pain in the left side of the chest. His physician made a diagnosis of active pulmonary tuberculosis. The man died August 15, 1922. No autopsy was held. During the entire time he tolerated anti-syphilitic remedies very badly, and although the urine became fairly clear, the bladder capacity remained small and the suprapubic wound opened from time to time.

The second patient was a woman 29 years of age, who consulted her physician on account of pain of two months' duration over the lower right abdomen. A careful physical examination, including an X-ray study of the gastro-intestinal tract, revealed no abnormalities, except a moderate amount of fluid in the abdomen and a few red blood cells in the urine. The X-ray showed an indefinite shadow in the right kidney area. The patient was referred to me because of the shadow over the right kidney, and on account of the presence of a few red blood cells in the urine. Cystoscopic examination showed upon the right wall of the bladder two ulcerated areas, from 6 to 8 mm. in diameter; one near, and the other about 2 cm. above the right meatus. The remaining bladder mucosa appeared normal. The left meatus was normal and the catheter passed easily up the ureter. Microscopic examination of the specimen collected from the left kidney was negative. No urine could be seen coming from the right side, nor could a catheter be passed up the ureter. Phenolsulphonephthalein appeared in five minutes with an output of 17 per cent upon the left side in fifteen minutes. The transvesical collection from the right side showed 9 per cent of phthalein. An X-ray of the kidneys, ureters and bladder was negative, and a pyelogram on the left side showed a normal kidney outline.

Again I could not decide from the cystoscopic picture positively the nature of the lesions in the bladder. The urine was examined for tubercle bacilli and none found. A blood Wassermann was reported as four-plus.

Considering the presence of fluid in the abdomen, the depressed function of the right kidney, the bladder picture, and the positive Wassermann test, the conclusion was reached that this patient had a syphilitic involvement of the liver, right kidney and bladder. She was placed upon anti-syphilitic treatment and had quite a severe reaction following two injections of salvarsan. Twenty-five intravenous injections of mercury were given. The patient was last seen October 10, 1922, reporting that she was feeling well. No evidence of ascites could be demonstrated.

The pathology of syphilis of the bladder has been studied post-mortem, through suprapubic cys-

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totomy and by means of the cystoscope. Thompson states that in the early course of the disease there is more or less congestion of the bladder mucosa, which may be likened to the diffuse eruption sometimes seen in the mouth and on the pharynx. Or there may be a distinct papular eruption, either with or without erosion or ulceration. The most frequent site of these lesions is around the ureteral orifices, usually around only one, but other portions of the bladder wall may be attacked. In the later stages of the disease the most frequent type of lesion is the ulcerating gumma. These ulcers are round, oval or irregular, and vary from one to two millimeters to several centimeters in diameter. They are usually of a grayish-yellow color with infiltrated edges and are sometimes covered by crustations. In some cases definite bleeding from the ulcers has been observed through the cystoscope and sometimes a blood clot can be seen attached to the ulcer.

Perforation and formation of a vesico-peritoneal fistula or a vesico-rectal fistula may occur. Sometimes there is only tumefaction without ulceration, the tumors varying in size from a small hazel nut to a walnut or larger. Papillomatous tumors have been observed, and even operated upon, on the assumption that they were benign papillomata. The microscopic picture of lesions of syphilis of the bladder has not been studied very thoroughly. There is no doubt that it is the same as found in similar lesions elsewhere and, briefly, consists of an infiltration of lymphocytes and plasma cells, proliferation of the fixed cells, and more or less endarteritis. The Wassermann test has proved very reliable in vesical lesions, and can be expected to be found positive in practically 100 per cent of all cases of bladder syphilis.

When ulcers, papillomas and solid tumors of the bladder are found upon cystoscopic examination, one cannot be positive regarding the nature of the lesions from the cystoscopic picture alone. A Wassermann test should, therefore, be done whenever the above mentioned lesions are found. Should the test show a positive reaction, a course of specific treatment is indicated prior to any surgical intervention.

DISCUSSION

Miley B. Wesson, M. D. (Flood Building, San Francisco)—This paper is most interesting and offers additional evidence for the necessity of routine Wassermann tests in all cases of ulcers and tumors. Judging from the literataure, syphilis of the bladder is very rare, but if every syphilitic was cystoscoped during the exanthematous stage it would undoubtedly be found that the mucous membrane of the bladder was also involved, even though there were no vesical symptoms. The bladder lesions vary from small mucous patches or ulcerated papules with elevated borders to tumors simulating a median lobe hypertrophy of the prostate. The most confusing tumors are the syphilitic papillomas, which can not be cystoscopically distinguished from benign papillomas. The first laboratory diagnosis of syphilis of the bladder was made only six years ago; some half-inch papillomas that had been removed suprapubically were reported as syphilitic condyloma, and at the same time the blood Wassermann was found to be strongly positive. The patient gave a history of a chancroid two years before, and two blood tests, taken in the Navy, had been negative.

There is nothing characteristic as to the symptoms or cystoscopic picture in bladder syphilis. The diagnosis rests upon the history and the presence or absence of other manifestations of syphilis, including the Wassermann test. All cases of hematuria and pollakiuria should be looked upon with suspicion until syphilis is ruled out. Dr. Peterson's paper emphasizes Sir William Osler's statement that the man who knew syphilis in all of its manifestations knew all of medicine.

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Some Recent Facts on Blood Pressure — Under this title the Metropolitan Life Insurance Company says: "Facts which have recently come to hand through a joint study by the Life Extension Institute and the Metropolitan Life Insurance Company indicate that we may have to revise our ideas on the causes of abnormal blood pressure. Heretofore, the literature has emphasized the importance of such items as overweight, high protein diet, the excessive use of tobacco, the existence of focal infections in the tonsils and in the dental structures. All of these, either singly or in combination, have been associated with the existence of abnormal blood pressures, either high or low. From the data gathered in the examination of nearly 17,000 policyholders of the Metropolitan Life Insurance Company by the Life Extension Institute in 1921, it appears that of the several factors above mentioned, only over-weight is consistently accompanied by a markedly higher percentage of high blood pressure. The other conditions are not clear-cut causative factors.

"Among white males who partok of too high protein diet, blood pressures 20 m.m. Hg. and more, above the average for age were noted in 7.3 per cent of the cases, and among all other persons examined and used as a control, that is, persons who did not partake of too high protein diets, the proportion of hypertension cases was 7.4 per cent! High blood pressure was recorded in 6.6 per cent of the cases where 'excessive use of tobacco' was observed, as compared with 7.8 per cent among those not using tobacco to excess. Suspected focal infection in the tonsils showed 7.4 per cent of the cases with hypertension, as compared with 7.3 per cent among white males showing no enlarged septic or buried tonsils. There were 6904 of these policyholders who had 'heavy dentistry,' that is to say, they had a large amount of bridgework, crowns, caps and other artificial dentures under which so many blind abscesses, areas of infection, etc., are found on X-ray. Presumably, these cases were all in the class which has received so much attention from dental pathologists recently. Yet, these policy-holders showed no more important departures in arterial tension than did the group which had no 'heavy dentistry.'

"The findings on low blood pressure are of interest also. Over-weights, high-protein feeders and persons with enlarged, septic or buried tonsils, had lower percentages of low blood pressure than did the control groups not showing these impairments. Low blood pressure was only slightly, perhaps insignificantly, pronounced among excessive users of tobacco and among persons having suspected dental infection.

"It is not entirely clear just what these figures mean in the light of the usually accepted ideas on causes of abnormal arterial tension. The figures simply suggest that certain etiologic factors described in general terms by the medical profession and familiar as such to the lay public, have no gross casual relationship either to high or low blood pressure."